**From:** Whipple, Wayne
**To:** Wilson, Linda J (Whiting); Caudill, Motria
**Subject:** RE: Slides for NEMC conference
**Date:** Tuesday, July 07, 2015 9:47:42 AM

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I corrected my set of the slides and if I can switch them out I will. The organizers have said the presentations submitted were the final presentations, and we submitted this one past the deadline. But, I am the chair for that session so chances are I might be able to get it in. If not I will state it clearly during the presentation.

Thanks for the help.

Wayne

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**From:** Wilson, Linda J (Whiting) [mailto:linda.wilson2@bp.com]
**Sent:** Tuesday, July 07, 2015 7:18 AM
**To:** Whipple, Wayne; Caudill, Motria
**Subject:** RE: Slides for NEMC conference

Thank you for the opportunity to review this presentation. Our main comment on the presentation is that slide 12 states that the 1-hour GC data includes "25% missing data". The implication seems to be that 25% of the data set is invalid measurement attempts, when the components of the 25% are mostly periods of calibration events specified as part of the analysis method, as well as a relatively small number of hours of truly invalid data due to malfunctions, power interruptions, etc. I would not characterize the period as "missing" since most of it was not planned for attempting ambient measurements. I recommend that the description be modified to say "25% calibration and maintenance events/ invalid data" to better characterize it and not imply that we may be close to not meeting the CD requirements.

- This also highlights an issue for evaluation, and that is whether EPA counted those hours where a GC result was not available as zero, or some other value in calculating a weeks-long average concentration to compare to the passive samples.

The rest is really more about observations when we reviewed the charts.

- It appears that either the tubes systematically overstate or canisters systematically understate concentrations.
- There appears to be some kind of temporal shift in week 6.

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**From:** Caudill, Motria [mailto:caudill.motria@epa.gov]
**Sent:** Wednesday, July 01, 2015 2:06 PM
**To:** Wilson, Linda J (Whiting)
**Cc:** Whipple, Wayne
**Subject:** Slides for NEMC conference

Hi Linda – Per our phone conversation, presentation slides are attached. Please let me know (and copy Wayne Whipple) if you have any edits. I'll send you a separate email about the possible benzene data issue; we can talk more about that after the conference. For now, it's good for us to focus on the canister vs. tube comparison and acknowledge BP's support in making this project possible.

Here is the link for the National Environmental Monitoring Conference (NEMC), which is July 13-17: http://www.nemc.us/

Below I've copied the abstract as it appears on the website.

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**Next Generation Ambient Air Monitoring for Benzene and Toluene Compared with Traditional Methods at the Fenceline of an Indiana Oil Refinery**

Oral Presentation

**Prepared by W. Whipple[1], M. Caudill[2]**
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2 - USEPA Region 5, 77 West Jackson Boulevard (AT-18J), Chicago, IL, 60604,

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## ABSTRACT

This study is part of a broader evaluation of a low-cost passive VOC sorbent tube sampler which was developed by EPA Office of Research and Development (ORD). This investigation was managed by EPA Region 5 in Chicago with sampling conducted on the basis of a fenceline air monitoring network at the BP Refinery in Whiting, Indiana. BP operates four stations which measure VOCs via continuous gas chromatograph as well as open path transceivers. EPA received permission to collocate passive sorbent tubes and canisters at these stations for weekly sampling between August and October 2014. Thirty complete sets of paired samples were collected, with sorbent tubes analyzed by EPA-ORD and canisters analyzed at EPA Chicago Regional Laboratory (CRL). BP Refinery, EPA-ORD, and EPA-CRL each reported a different list of VOC compounds, ranging in number from four species at BP to 60 at EPA-CRL. All organizations reported benzene and toluene, thus allowing a four-way method comparison for these hazardous air pollutants. EPA scientists made a quantitative and qualitative assessment of the four analytical methods and made recommendations on their appropriate uses in future fenceline and community-based air monitoring studies.

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